

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

The listing is based on the last entered amendment of October 31, 2003:

**Listing of the Claims:**

Claim 1 (currently amended): A pharmaceutical composition for application at a biodegradable plate-containing site requiring new bone[,] or cartilage ~~or connective tissue~~ formation in a subject, comprising a plurality of bone marrow stromal cells (MSCs) and a pharmaceutically acceptable polymer,

wherein the MSCs are isolated from the subject; are transduced *in vitro* after isolation from the subject with wherein the MSCs comprise a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter, and are applied at the biodegradable plate-containing site and a pharmaceutically acceptable polymer.

Claim 2 (original): The composition as recited in Claim 1 wherein the polymer is selected from a group consisting of alginate and collagen.

Claim 3 (original): The composition as recited in Claim 1 wherein the MSCs are present in a concentration of about  $50 \times 10^6$  per ml of the polymer.

Claim 4 (previously presented): The composition as recited in Claim 1 wherein the polymer is collagen type I.

Claim 5 (currently amended): A method of enhancing new bone[,] or cartilage ~~or connective tissue~~ formation in a subject, comprising:

- a. obtaining a plurality of bone marrow stromal cells (MSCs) from a the subject;
- b. transducing the MSCs of step a) with a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter to generate BMP-2 protein producing MSCs;
- c. applying a biodegradable plate to a site requiring new bone[,] or cartilage ~~or connective tissue~~ formation on the subject; and
- d. applying a composition comprising the BMP-2 protein producing MSCs and a pharmaceutically acceptable polymer to the site,  
such that new bone[,] or cartilage ~~or connective tissue~~ formation is enhanced.

Claim 6 (currently amended): The method as recited in Claim 5 wherein the ~~DNA sequence encoding BMP-2 is transferred via replication-deficient viral vector~~ is an adenovirus.

Claim 7 (cancelled)

Claim 8 (previously presented): The method as recited in Claim 5 wherein the protein producing MSCs are topically applied in a concentration of about  $50 \times 10^6$  per ml of a pharmaceutically acceptable polymer and produce an effective amount of the protein.

Claims 9-10 (cancelled)

Claim 11 (previously presented): The composition of claim 1 wherein the composition is a gel.

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Claim 12 (previously presented): The method of claim 5 wherein the composition is a gel.

Claim 13 (previously presented): The composition of claim 1 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).

Claim 14 (previously presented): The method of claim 5 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).